FIG. 1

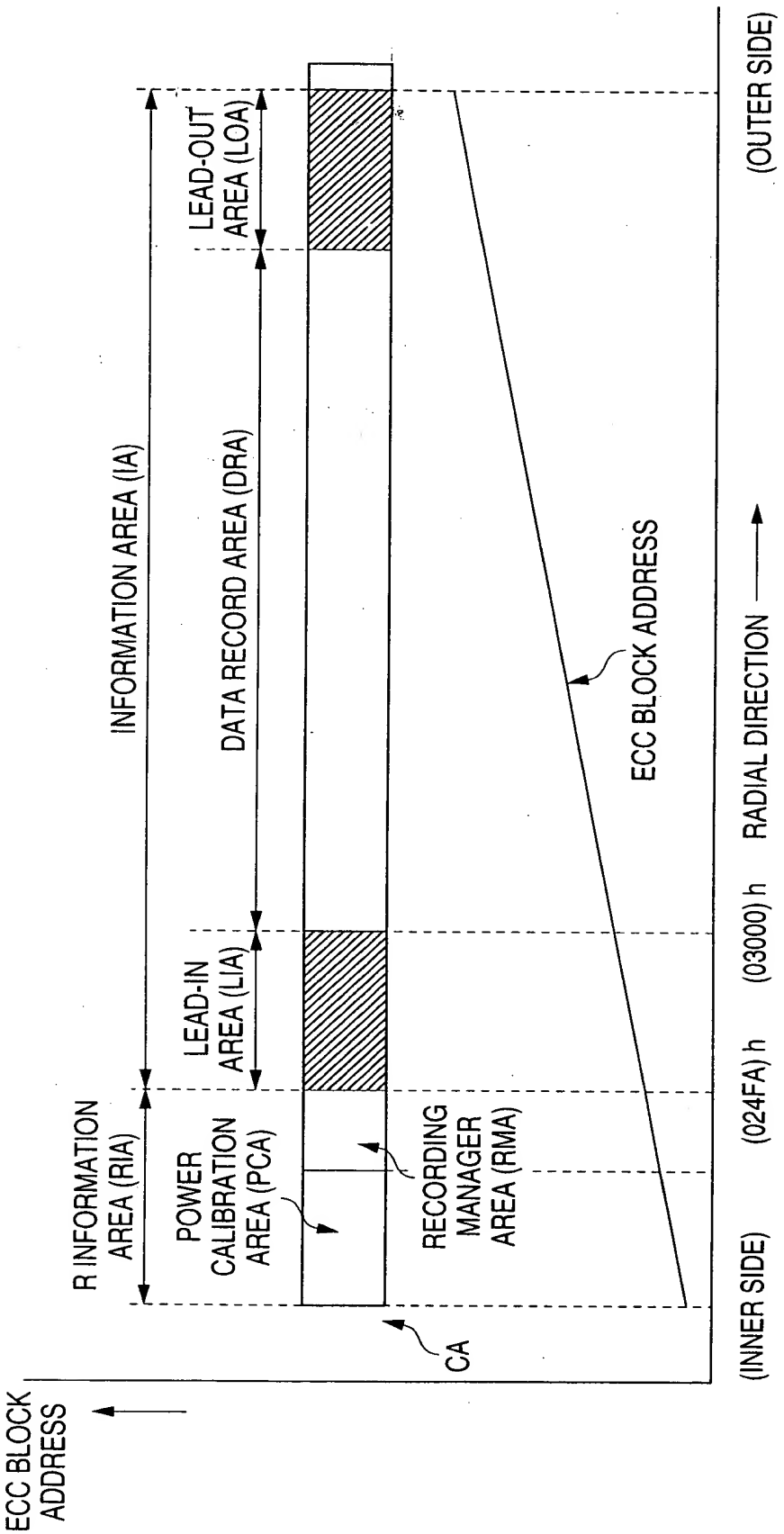
ECC BLOCK ADDRESS
INFORMATION AREA (IA)
LEAD-OUT AREA (LOA)
DATA RECORD AREA (DRA)
LEAD-IN AREA (LIA)
R INFORMATION AREA (RIA)
POWER CALIBRATION AREA (PCA)
RECORDING MANAGER AREA (RMA)
CA
ECC BLOCK ADDRESS
(INNER SIDE)
(024FA) h
(03000) h
RADIAL DIRECTION
(OUTER SIDE)

FIG. 2

(A VIEW SHOWING THE STRUCTURE OF ECC BLOCK)

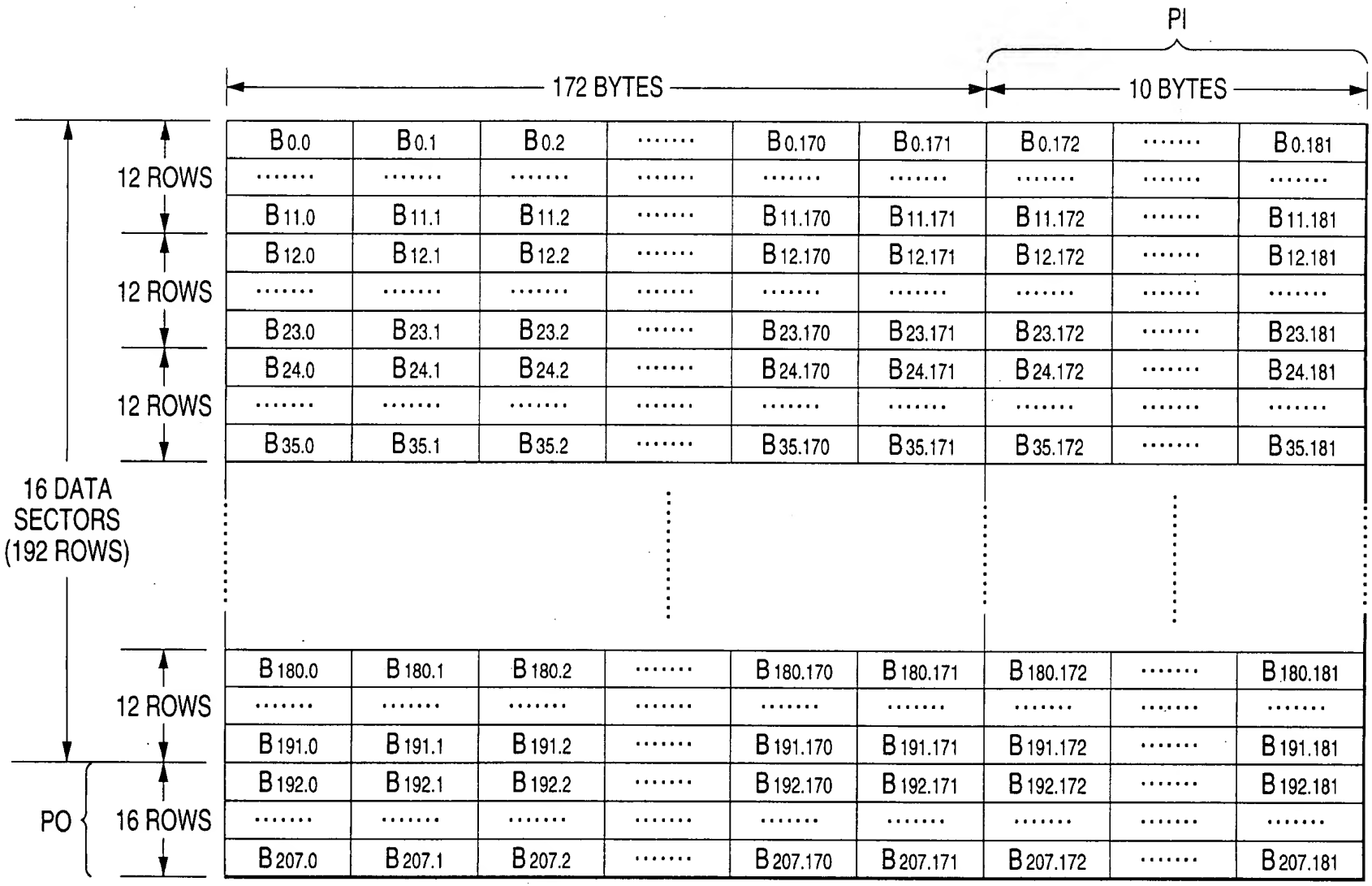

FIG. 3

(A VIEW SHOWING THE STRUCTURE OF DATA SECTOR)

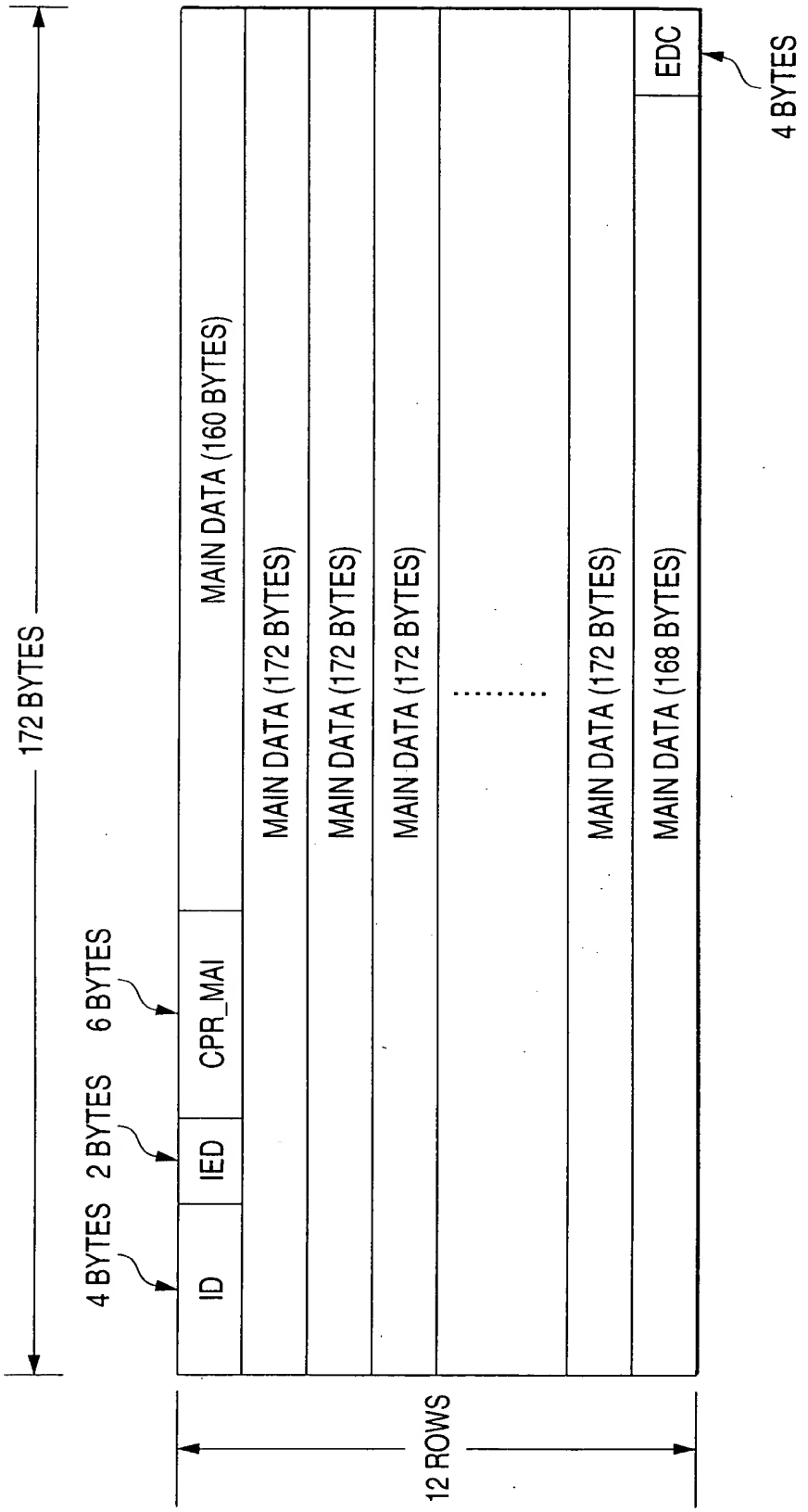

FIG. 4

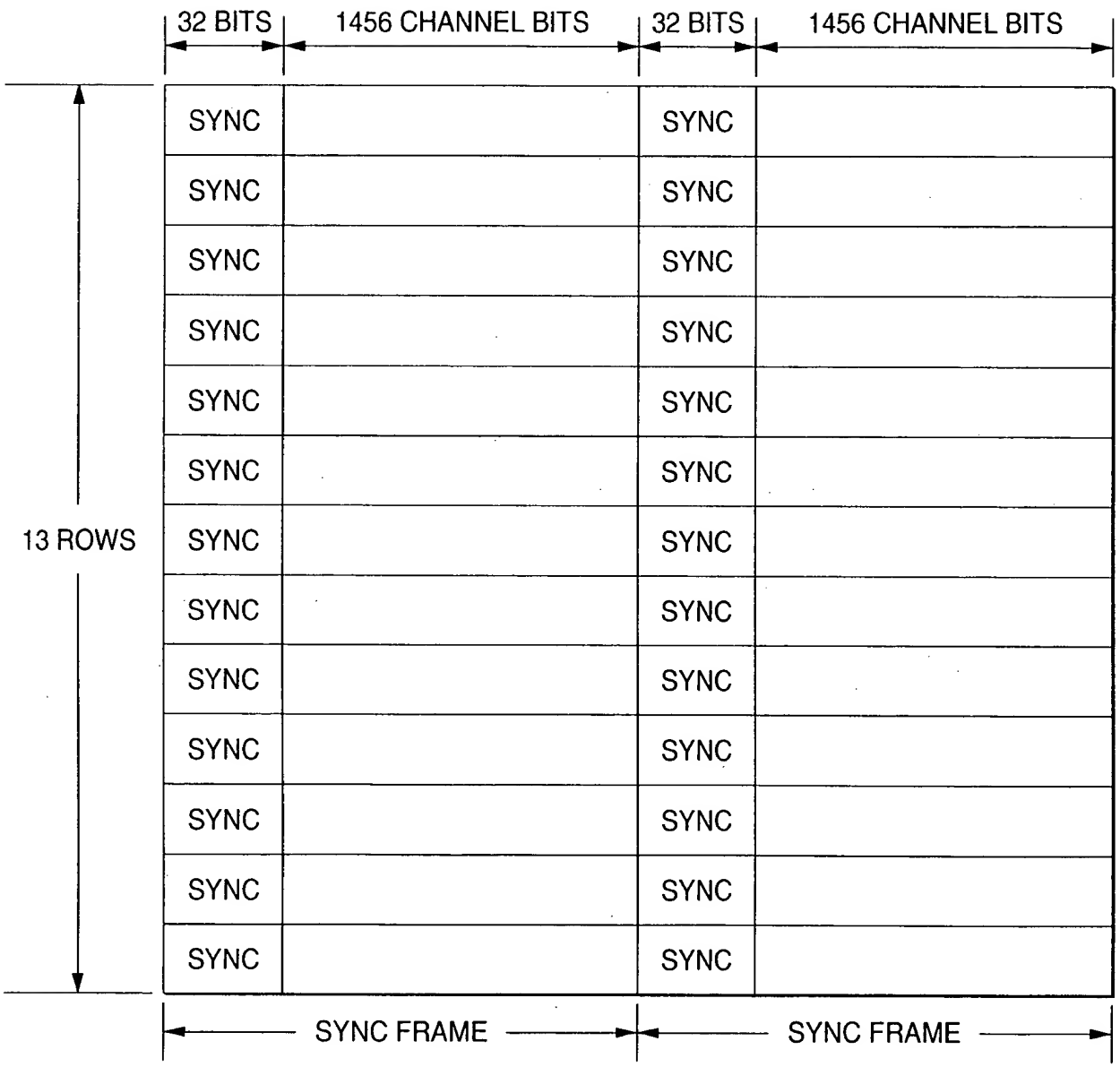
32 BITS
1456 CHANNEL BITS
32 BITS
1456 CHANNEL BITS
13 ROWS
SYNC
SYNC FRAME
SYNC FRAME

FIG. 5

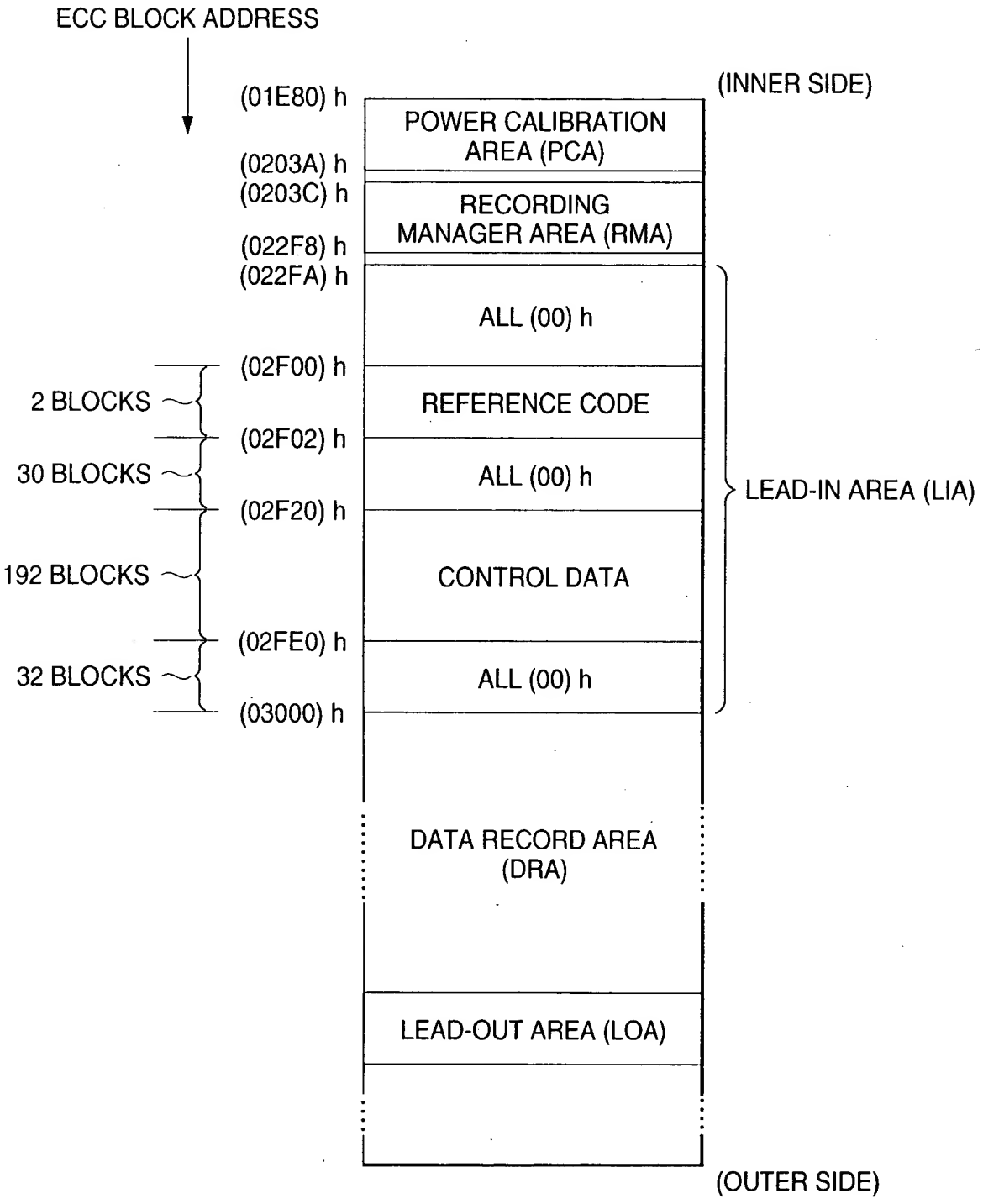
ECC BLOCK ADDRESS
(INNER SIDE)
(01E80) h
POWER CALIBRATION AREA (PCA)
(0203A) h
(0203C) h
RECORDING MANAGER AREA (RMA)
(022F8) h
(022FA) h
ALL (00) h
(02F00) h
2 BLOCKS
REFERENCE CODE
(02F02) h
30 BLOCKS
ALL (00) h
(02F20) h
192 BLOCKS
CONTROL DATA
(02FE0) h
32 BLOCKS
ALL (00) h
(03000) h
LEAD-IN AREA (LIA)
DATA RECORD AREA (DRA)
LEAD-OUT AREA (LOA)
(OUTER SIDE)

FIG. 6

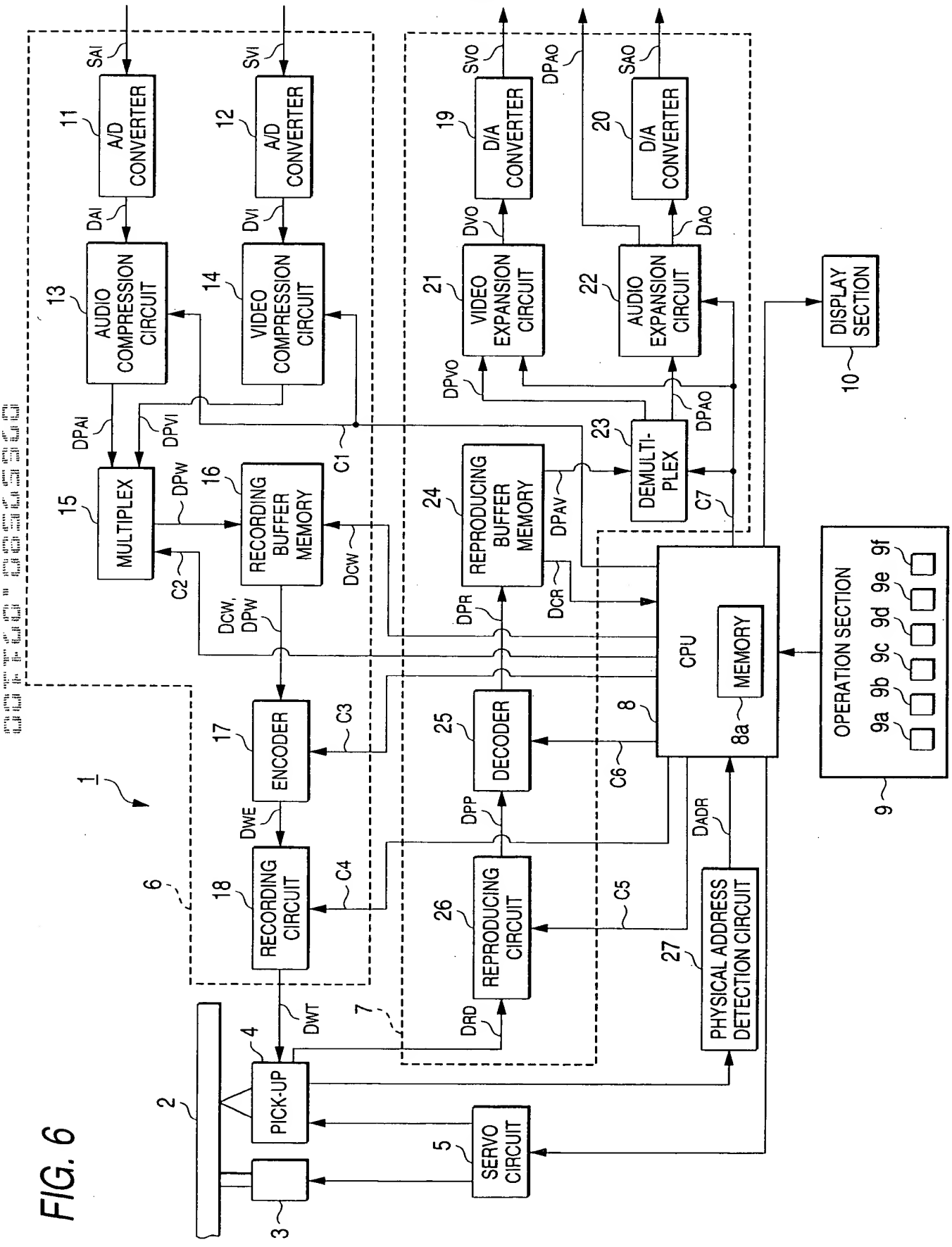
1
2
3
4
5
6
7
8
8a
9
9a 9b 9c 9d 9e 9f
10
11 A/D CONVERTER
12 A/D CONVERTER
13 AUDIO COMPRESSION CIRCUIT
14 VIDEO COMPRESSION CIRCUIT
15 MULTIPLEX
16 RECORDING BUFFER MEMORY
17 ENCODER
18 RECORDING CIRCUIT
19 D/A CONVERTER
20 D/A CONVERTER
21 VIDEO EXPANSION CIRCUIT
22 AUDIO EXPANSION CIRCUIT
23 DEMULTI-PLEX
24 REPRODUCING BUFFER MEMORY
25 DECODER
26 REPRODUCING CIRCUIT
27 PHYSICAL ADDRESS DETECTION CIRCUIT
CPU
MEMORY
DISPLAY SECTION
OPERATION SECTION
PICK-UP
SERVO CIRCUIT
SAI
SVI
DAI
DVI
DPAI
DPVI
DPW
DCW
DCW, DPW
C1
C2
C3
C4
C5
C6
C7
DWE
DWT
DRD
DPP
DPR
DCR
DPAV
DADR
SVO
DPAO
SAO
DVO
DAO
DPVO

FIG. 7

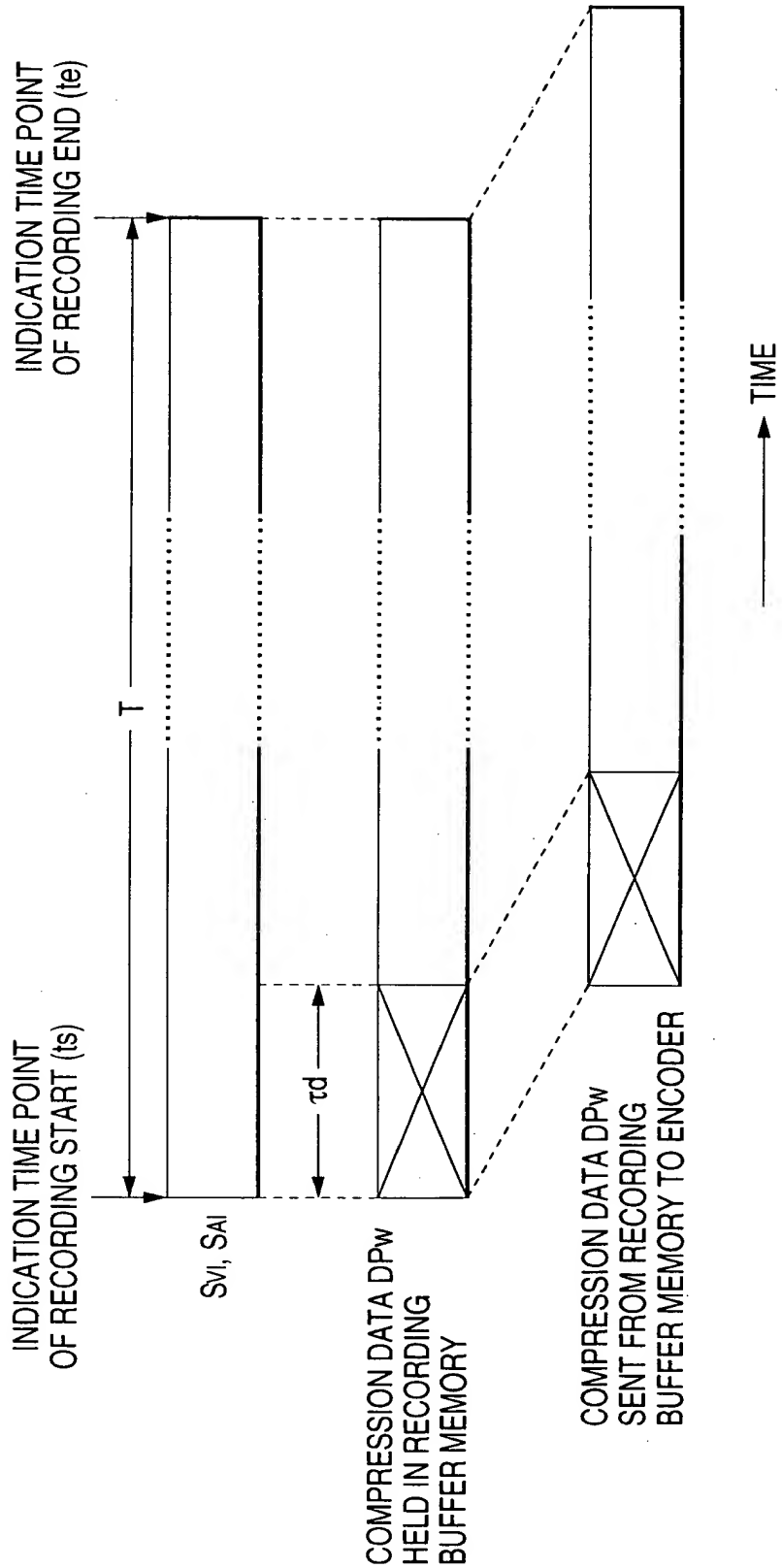
INDICATION TIME POINT
OF RECORDING END (te)
T
INDICATION TIME POINT
OF RECORDING START (ts)
SVI, SAI
τd
COMPRESSION DATA DPW
HELD IN RECORDING
BUFFER MEMORY
COMPRESSION DATA DPW
SENT FROM RECORDING
BUFFER MEMORY TO ENCODER
TIME

FIG. 8

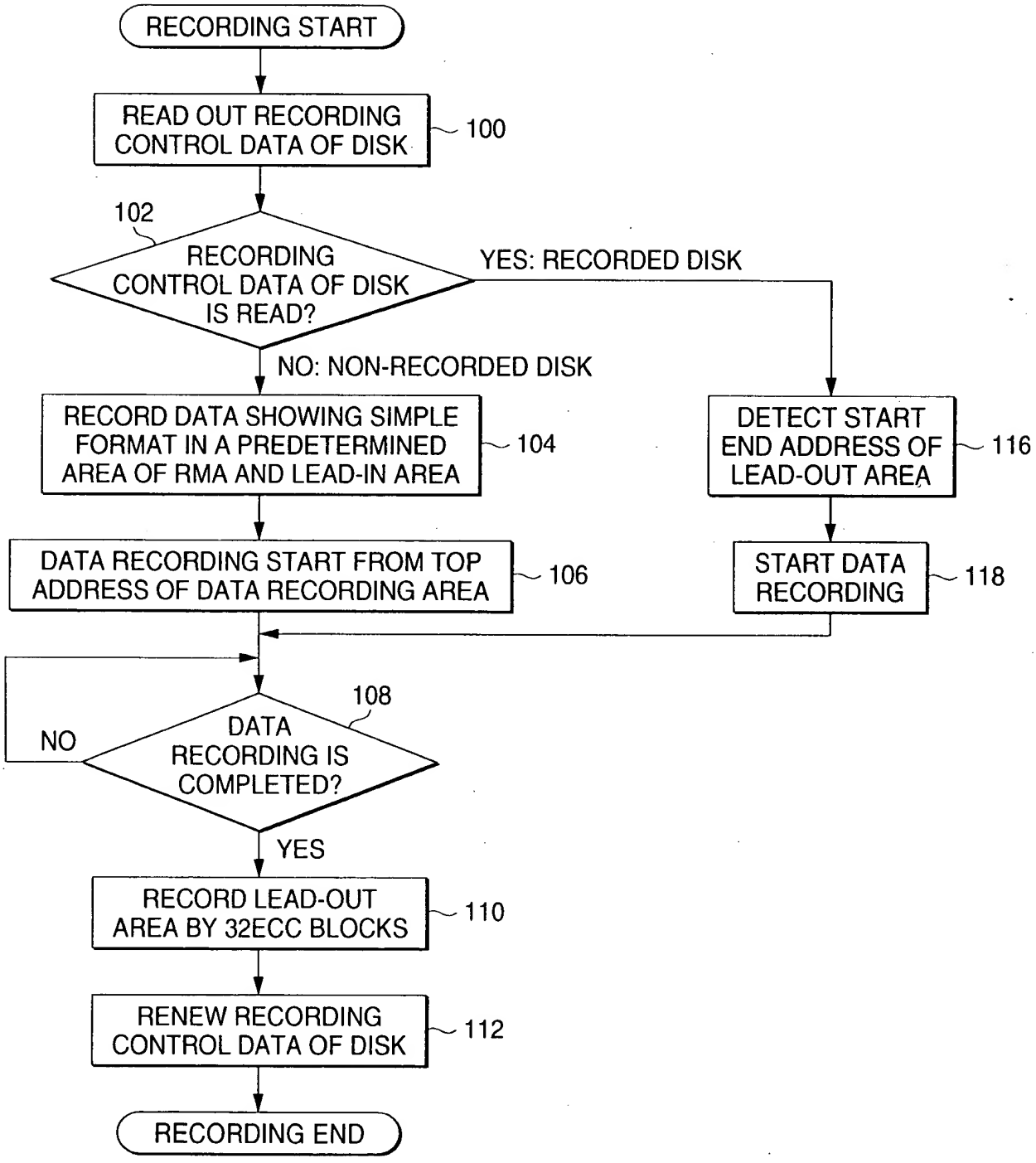
RECORDING START
READ OUT RECORDING CONTROL DATA OF DISK
100
102
RECORDING CONTROL DATA OF DISK IS READ?
YES: RECORDED DISK
NO: NON-RECORDED DISK
RECORD DATA SHOWING SIMPLE FORMAT IN A PREDETERMINED AREA OF RMA AND LEAD-IN AREA
104
DETECT START END ADDRESS OF LEAD-OUT AREA
116
DATA RECORDING START FROM TOP ADDRESS OF DATA RECORDING AREA
106
START DATA RECORDING
118
108
NO
DATA RECORDING IS COMPLETED?
YES
RECORD LEAD-OUT AREA BY 32ECC BLOCKS
110
RENEW RECORDING CONTROL DATA OF DISK
112
RECORDING END

FIG. 9

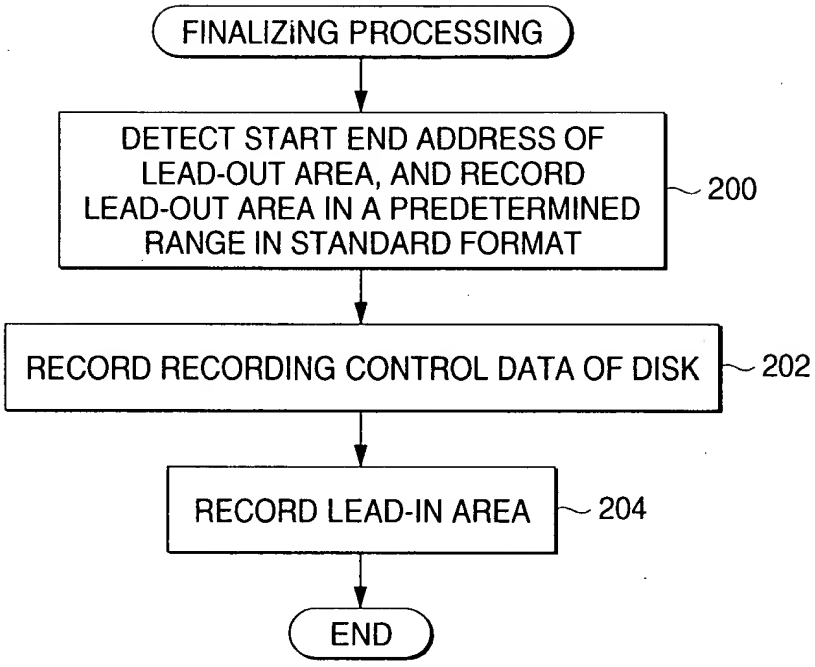
FINALIZiNG PROCESSING
DETECT START END ADDRESS OF LEAD-OUT AREA, AND RECORD LEAD-OUT AREA IN A PREDETERMINED RANGE IN STANDARD FORMAT
200
RECORD RECORDING CONTROL DATA OF DISK
202
RECORD LEAD-IN AREA
204
END

FIG. 10A

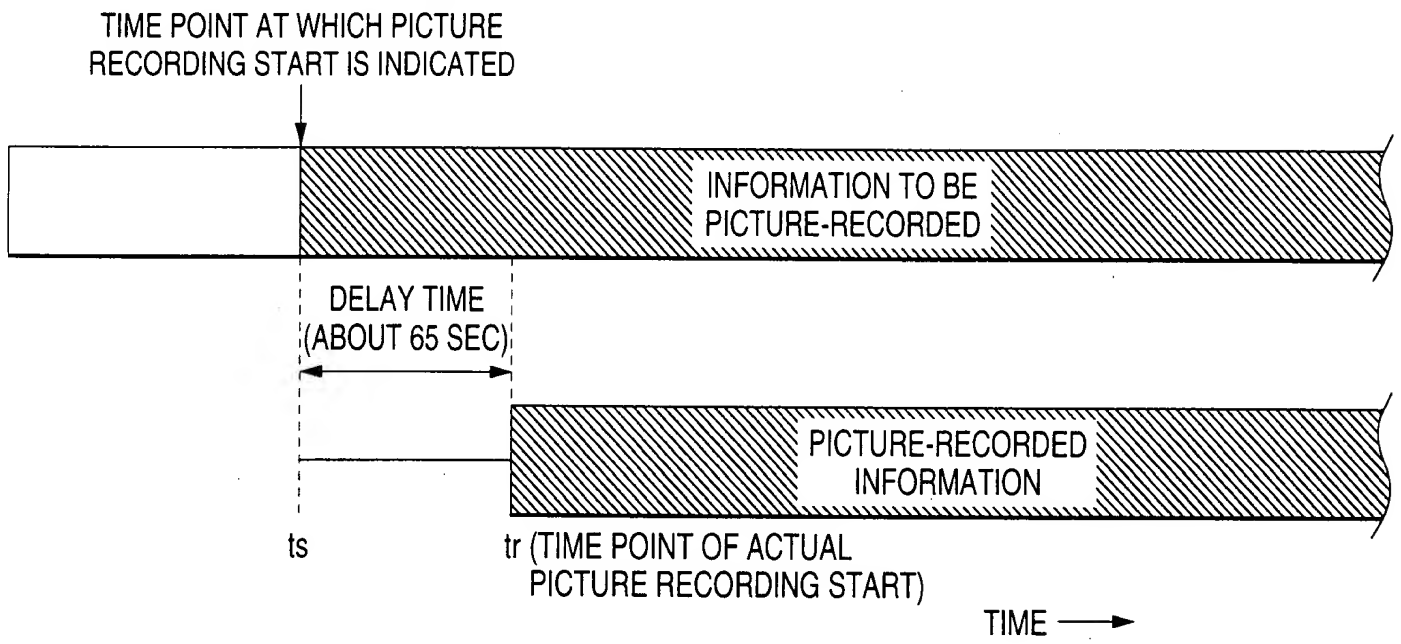
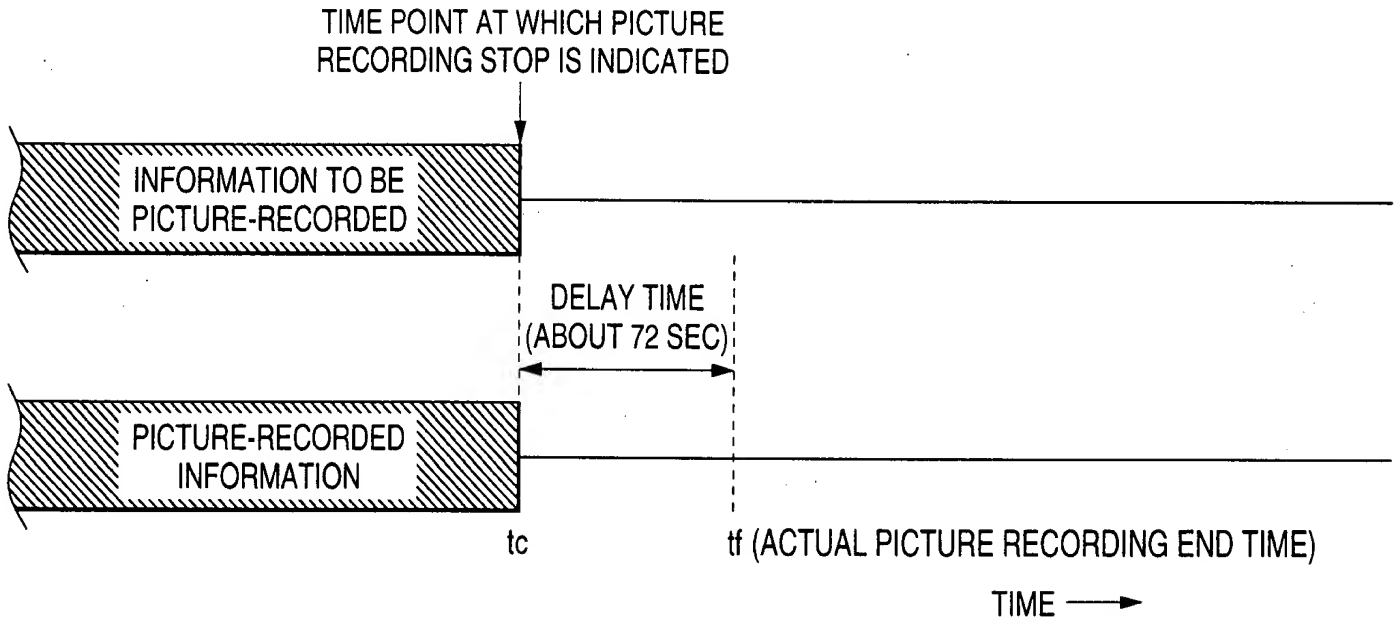
FIG. 10B